



Human Resources Management

USDA Forest Service

National Collective Recruitment and Hiring Program

Job Descriptions & Qualifications Library



Human Resources Management

Table of Contents

USDA Forest Service	1
Introduction.....	3
Series 0301 (Geospatial systems specialist)	3
Series 0401 (Natural resource specialists, biological scientists, fire management specialists)	4
Series 0408 (Ecologist).....	5
Series 0454 (Rangeland management specialist).....	5
Series 0460 (Foresters)	6
Series 0462 (Forestry Technicians, Recreation technicians, wildland firefighters, forestry technicians)	6
Series 0470 (Soils scientist)	7
Series 0482 (Fish biologist).....	8
Series 0486 (Wildlife biologist).....	9
Series 0802 (Engineering technician).....	10
Series 0810 (Civil engineer)	11
Series 1001 (Visitor information assistant)	12
Series 1101 (Resource assistant)	12
Series 1102 (Contract specialist)	13
Series 1105 (Purchasing agent)	13
Series 1170 (Realty specialist)	14
Series 1315 (Hydrologist)	15
Series 2210 (Information technology specialist)	15



Human Resources Management

Introduction

The purpose of this document is to provide brief, succinct descriptions and basic qualifications of the most common Forest Service jobs. This is a simplified resource for outreach and recruitment specialists to use while interacting with the public. This document is not intended to be shared with the public, rather, it should be used as a reference material for Forest Service employees. Descriptions from this library can be used in other materials created specifically for public distribution.

A note about basic qualifications: In general, a bachelor's degree will qualify a person to start at a GS-05. A person may qualify to start at a GS-07 with a degree and superior academic achievement, which is normally a cumulative GPA over 3.0. A person may also qualify to start at a GS-07 with at least 1 year of related graduate education. Most of the specific qualifications are met with an appropriate undergraduate degree. A human resource specialist will make the final determination on qualifications.

Series 0301 (Geospatial systems specialist)

Series	Description and Basic Qualifications
0301	<p>Geospatial systems specialists use Geographic Information Systems (GIS) and geospatial technology to analyze and identify the geographic location of features and boundaries for use in management of National Forest lands. Geospatial system specialists make sure maps are accurate for public use, research, natural resources management and responding to emergency incidents such as wildfires.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none">• There are no Individual Occupational Requirements for this series listed under Office of Personnel Management. Candidates are evaluated for specific work experience.• Desired education/experience varies by type of position, yet should be related to a natural resources orientation.• To start at the GS-05: Requires a bachelor's degree.• To start at the GS-07: Superior academic achievement or 1 full year of graduate level education.• To start at the GS-09: Requires a master's degree or equivalent graduate degree or 2 full years of progressively higher level graduate education leading to a master's degree or equivalent graduate degree.



Human Resources Management

Series 0401 (Natural resource specialists, biological scientists, fire management specialists)

Series	Description and Basic Qualifications
0401	<p>Natural resource specialists are responsible for monitoring and reducing the impacts caused by forest visitors and other influences. Duties can include developing, overseeing and maintaining popular recreation facilities such as trails, campgrounds and picnic areas; reducing the spread of invasive species; and issuing special use permits.</p> <p>Biological scientists work outdoors conducting research by identifying, preserving and collecting data on the different types and sizes of trees, plants, insects and animals. Data is then analyzed and used to help make policy decisions. Biological scientists use maps, compasses, data recorders and other tools to conduct research.</p> <p>Fire management specialists focus on planning and implementing prescribed fire, fuels management, smoke management and wildland fire use. They also analyze the likelihood of wildfires, fire behavior and fire effects using computer models. Data, such as the types of trees, amount of accumulated forest debris on the ground, air quality and historical wildfire records, are taken into consideration when planning a prescribed fire or analyzing wildland fire behavior. Fire management specialists work with partners at local, state and federal levels to enhance, restore and protect ecosystems.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none">• Requires a bachelor's degree in biological sciences, agriculture, natural resource management, chemistry, or related disciplines such as environmental science, conservation, ecology, rangeland management, wildlife or fish biology, forestry, natural resources recreation (as opposed to general recreation management or leisure studies), and Geographic Information Systems (as opposed to information technology).• Link to Office of Personnel Management Qualifications for Series 401



Human Resources Management

Series 0408 (Ecologist)

Series	Description and Basic Qualifications
0408	<p>Ecologists study interactions among plants, animals and their environment for scientific investigations. Their research includes how the public uses the land, where prescribed fires could be effective and the effects of cutting trees on plants and animals. Ecologists read maps and interpret photographs to locate research sites, use different tools to measure various types of data and coordinate with research scientists on projects.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none">• Requires a bachelor's degree in biology, or a related field of science underlying ecological research that includes at least 30 semester hours in basic and applied biological sciences. These hours must have included at least 9 semester hours in ecology, and 12 semester hours in physical and mathematical sciences.• Link to Office of Personnel Management Qualifications for Ecology Series 408

Series 0454 (Rangeland management specialist)

Series	Description and Basic Qualifications
0454	<p>Rangeland management specialists manage range vegetation on National Forest lands for a variety of uses, including grazing by livestock and forage for wildlife. They also work closely with livestock producers while managing permits which allows grazing on National Forest lands. They also analyze ecosystem health and maintain diversity of plant and grass communities in grazing areas.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none">• Requires a bachelor's degree in range management; or a related discipline that includes at least 42 semester hours in a combination of the plant, animal, and soil sciences, and natural resources management.• The Rangeland management specialist needs courses in three specific areas:<ul style="list-style-type: none">○ Range Management○ Directly related courses in the plant, animal, and soil sciences○ Relate Resource Management studies



Human Resources Management

Series	Description and Basic Qualifications
--------	--------------------------------------

- | | |
|--|--|
| | <ul style="list-style-type: none">Link to Office of Personnel Management Qualifications for Series 454 |
|--|--|

Series 0460 (Foresters)

Series	Description and Basic Qualifications
--------	--------------------------------------

0460	<p>Foresters work outdoors and are experts in managing growth of different types of trees and other vegetation. They are skilled in planting, removing or caring for trees, while considering how a forest may develop over long time frames. From planting seedlings to inspecting a contractor's work, foresters provide the technical and professional expertise for evaluating the health of our forests.</p>
-------------	--

Basic Qualifications:

- | | |
|--|---|
| | <ul style="list-style-type: none">• Requires a bachelor's degree in Forestry (Forestry, Forest Resources, Forest Management, Forest Science) or a related area that also includes at least 30 Semester Hours in science, of which at least 24 hours were in Forestry.• The Forester needs courses in three specific areas; Management of Renewable Resources, Forest Biology, and Forest Resource Measurements and Inventory.• Link to Office of Personnel Management Qualifications for Series 460 |
|--|---|

Series 0462 (Forestry Technicians, Recreation technicians, wildland firefighters)

Series	Description and Basic Qualifications
--------	--------------------------------------

0462	<p>Forestry technicians work almost entirely outdoors in physically demanding conditions in different types of weather, evaluating forest conditions and preparing timber to be cut and sold. Their tasks include data collection, inventory, tree planting, pruning, thinning and cutting trees. They also perform inspections of areas where trees were cut or planted and prepare written reports of the final inspection. This commonly includes specialties such as timber sale reparation, timber stand improvement, and timber sale administration.</p>
-------------	---



Human Resources Management

Series	Description and Basic Qualifications
	<p>Recreation technicians perform a variety of outdoor assignments, which allow the public to safely access and enjoy special places, such as trails, campgrounds, rivers and lakes. Common duties include clearing downed trees from hiking trails, cleaning campground facilities and providing information about recreational opportunities. This commonly includes specialties in general recreation, trails, and wilderness.</p> <p>Wildland firefighters are involved with wildland fire suppression, management and control. Firefighters may be away from home for weeks at a time, often working long hours outdoors and may fly in helicopters, hike into mountainous areas or patrol on roads to access wildfires. They also often speak to the public about fire prevention.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none">• To start at GS-04: An associate or bachelor's degree with any major with at least 12 Semester Hours in any combination of courses such as forestry, agriculture, crop or plant science, range management or conservation, wildlife management, watershed management, soil science, natural resources (except marine fisheries and oceanography), outdoor recreation management, civil or forest engineering, or wildland fire science. Three semester hours of mathematics can be counted.• To start at GS-05: A bachelor's degree in forestry, range management, agriculture, or a subject-matter field directly related to the position (such as those listed for GS-04). Or a degree in any subject that included at least 24 semester hours in any combination of courses such as those shown above for GS-4. Six semester hours of mathematics can be counted.• Link to Office of Personnel Management Qualifications for Series 462

Series 0470 (Soils scientist)

Series	Description and Basic Qualifications
0470	<p>Soils Scientists spend time outdoors collecting soil samples in order to determine physical, chemical, and morphological characteristics in different areas of a watershed. Soils scientists describe and classify soil properties according to the National Cooperative Soil Survey standards and determine how suitable an area is for management. They write watershed restoration plans, erosion control plans, soil resources improvement plans, soil</p>



Human Resources Management

Series	Description and Basic Qualifications
	<p>management reports, soil survey reports, and special project reports for management. Soil scientists take care of the soil.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none">• Requires a bachelor's degree in soil science or a closely related discipline that includes 30 semester hours or equivalent in biological, physical, or earth science, with a minimum of 15 semester hours in such subjects as soil genesis, pedology, soil chemistry, soil physics, and soil fertility.• For series 0470, a bachelor's degree will qualify a person to start at a GS-05.• A person may qualify to start at a GS-07 with a degree plus superior academic achievement, normally a cumulative GPA over 3.0.• A person may also qualify to start at a GS-07 with at least 1 year of related graduate education—natural resources management, conservation, environmental management or environmental policy, etc. Most of the specific qualifications are met with an appropriate undergraduate degree.• People who actually study soils are limited in number. For soils, a person actually needs to study soils.• Link to Office of Personnel Management Qualifications for Series 470

Series 0482 (Fish biologist)

Series	Description and Basic Qualifications
0482	<p>Fish biologists evaluate and monitor fish and other aquatic species in their habitats of streams, rivers and lakes to assess aquatic ecosystem health. Projects such as timber sales, road work and habitat restoration are evaluated for possible impacts to fish and water quality. They design stream and floodplain restoration projects and provide recommendations for management.</p> <p><u>Basic Qualifications for Non-research positions:</u></p> <ul style="list-style-type: none">• Requires a bachelor's degree in biological science that includes at least 6 semester hours in aquatic subjects such as limnology, ichthyology, fishery biology, aquatic botany, aquatic fauna, oceanography, fish culture, or related courses in the field of fishery biology; and at least 12 semester hours in the animal sciences in such subjects as general



Human Resources Management

Series	Description and Basic Qualifications
	<p>zoology, vertebrate zoology, comparative anatomy, physiology, entomology, parasitology, ecology, cellular biology, genetics, or research in these fields.</p> <p><u>Basic Qualifications for Research positions:</u></p> <ul style="list-style-type: none"> Requires a bachelor's degree with major study in biology, zoology, or biological oceanography that includes at least 30 semester hours in biological and aquatic science and 15 semester hours in the physical and mathematical sciences. Link to Office of Personnel Management Qualifications for Series 0482

Series 0486 (Wildlife biologist)

Series	Description and Basic Qualifications
0486	<p>Wildlife biologists evaluate and monitor forest projects, such as road work and trail enhancements, to develop recommendations that protect and conserve wildlife and their habitat. They are an essential part of the agency because they work with local, state, non-profit and federal partners to help restore habitats, assess population trends and meet conservation goals.</p> <p><u>Basic Qualifications for Non-research positions:</u></p> <ul style="list-style-type: none"> Requires a bachelor's degree in biological science that includes at least 9 semester hours in wildlife subjects (mammalogy, ornithology, animal ecology, wildlife management, or research courses in the field of wildlife biology); and at least 12 semester hours in zoology (general zoology, invertebrate zoology, vertebrate zoology, comparative anatomy, physiology, genetics, ecology, cellular biology, parasitology, entomology, or research courses in such subjects); and at least 9 semester hours in botany or related plant sciences. Excess courses in wildlife biology may be used to meet the zoology requirements where appropriate For the 0486, a bachelor's degree will qualify a person to start at a GS-05. A person may qualify to start at a GS-07 with a degree plus superior academic achievement, normally a cumulative GPA over 3.0. A person may also qualify to start at a GS-07 with at least 1 year of related graduate education—natural resources management,



Human Resources Management

Series	Description and Basic Qualifications
	<p>conservation, environmental management or environmental management or environmental policy, etc. Most of the specific qualifications are met with an appropriate undergraduate degree</p> <ul style="list-style-type: none"> Challenge to consider: Many general biology majors apply to the 0486, often lacking wildlife and plants credit. <p><u>Basic Qualifications for Research positions:</u></p> <ul style="list-style-type: none"> Requires a bachelor's degree with major in wildlife biology, zoology, or botany that included at least 30 semester hours of course work in biological science and 15 semester hours in the physical, mathematical, and earth sciences. This course work must have included: <ul style="list-style-type: none"> At least 9 semester hours of training applicable to wildlife biology in such subjects as mammalogy, ornithology, animal ecology, wildlife management, principles of population dynamics, or related course work in the field of wildlife biology; and At least 12 semester hours in zoological subjects such as invertebrate zoology, vertebrate zoology, comparative anatomy of the vertebrates, embryology, animal physiology, entomology, herpetology, parasitology, and genetics; and At least 9 semester hours in the field of botany and related plant science; and At least 15 semester hours of training in any combination of two or more of the following: chemistry, physics, mathematics, statistics, soils, and/or geology Link to Office of Personnel Management Qualifications for Series 486

Series 0802 (Engineering technician)

Series	Description and Basic Qualifications
0802	<p>Engineering technicians work with engineers to make sure roads are in good condition, buildings are safe and other structures are maintained for public use. They help design roads and structures, such as culverts and retaining walls. They spend significant time outdoors collecting data on soil, topography, gradient, stream location and other physical characteristics to determine where a road or structure should be placed. Engineering technicians help prepare final plans and drawings for civil engineers.</p> <p><u>Basic Qualifications:</u></p>



Human Resources Management

Series	Description and Basic Qualifications
	<ul style="list-style-type: none"> To start at GS-03: Successful completion of 1 year of post-secondary study that includes at least 6 semester hours in any combination of courses such as engineering, engineering or industrial technology, construction, physics, drafting, surveying, physical science, or mathematics. To start at GS-04: An Associate's Degree that includes at least 12 semester hours in any combination of courses such as those shown above for GS-3 (or equivalent). At least 3 of the 12 semester hours must have been in drafting if the position has been designated by a drafting area of specialization. To start at GS-05: A bachelor's degree in an appropriate field of engineering, construction, or industrial technology; or (b) that includes at least 24 semester hours in any combination of courses such as those shown above for GS-3 (or equivalent). At least 6 of the 24 semester hours must have been in drafting if the position has been designated by a drafting area of specialization.

Series 0810 (Civil engineer)

Series	Description and Basic Qualifications
0810	<p>Civil engineers design and maintain the roads, bridges, buildings, water systems and wastewater systems on National Forest lands, ensuring they are available and safe for the public to use. Conducting condition surveys, maintenance, designing work specifications and drawings for contracts, and inspecting contractor work are critical aspects of a civil engineer's job.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none"> Requires a bachelor's degree from a school of engineering with at least one program accredited by the Accreditation Board for Engineering and Technology, Inc. (ABET); or, A degree that includes differential and integral calculus and courses (more advanced than first-year physics and chemistry) in five of the following seven areas of engineering science or physics: (a) statics, dynamics; (b) strength of materials (stress-strain relationships); (c) fluid mechanics, hydraulics; (d) thermodynamics; (e) electrical fields and circuits; (f) nature and properties of materials (relating particle and aggregate structure to properties); and (g) any other comparable area



Human Resources Management

Series	Description and Basic Qualifications
	<p>of fundamental engineering science or physics, such as optics, heat transfer, soil mechanics, or electronics.</p> <ul style="list-style-type: none"> To start at GS-07: Superior academic achievement at the baccalaureate level in an engineering program. Link to Office of Personnel Management Qualifications for Series 0800

Series 1001 (Visitor information assistant)

Series	Description and Basic Qualifications
1001	<p>Visitor information assistants greet all customers that enter a Forest Service office or visitor center and provide information about National Forests. In addition to maintaining the front desk and answering the phone, they also sell products like maps, permits and recreation passes.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none"> There are no Individual Occupational Requirements for this series listed under Office of Personnel Management. Desired education/experience can vary, yet should be related to a natural resources orientation. To start at the GS-05: Requires a bachelor's degree.

Series 1101 (Resource assistant)

Series	Description and Basic Qualifications
1101	<p>Resource assistants help manage natural resources by tracking and accounting for the financial aspects of timber activities. They also interact with individuals and businesses regularly to sell and oversee special forest product permits, like Christmas tree, firewood and mushroom permits.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none"> There are no Individual Occupational Requirements for this series listed under Office of Personnel Management. Desired (but not required) majors could be natural resources, agriculture, agribusiness/agricultural economics, and business. To start at the GS-05: Requires a bachelor's degree.



Human Resources Management

Series 1102 (Contract specialist)

Series	Description and Basic Qualifications
1102	<p>Contract specialists work directly with vendors and service providers to manage various contracts for goods and services, such as office improvements, road work, building structures and other support services. Contract specialists develop and manage contracts to make sure that laws, regulations, policies and procedures are followed.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none">• Requires a bachelor's degree in any field, or at least 24 semester hours in any combination of the following fields: accounting, business, finance, law, contracts, purchasing, economics, industrial management, marketing, quantitative methods, or organization and management.• To start at GS-07: Superior academic achievement at the baccalaureate level or 1 full academic year of graduate education or law school.• To start at GS-09: Two full academic years of progressively higher level graduate education or masters or equivalent graduate degree or LL.B. or J.D.• To start at GS-11: Three full academic years of progressively higher level graduate education or Ph.D. or equivalent doctoral degree.• Link to Office of Personnel Management Qualifications for Series 1102

Series 1105 (Purchasing agent)

Series	Description and Basic Qualifications
1105	<p>Purchasing agents are responsible for buying items and services for the Forest Service, including materials and supplies, special tools, plumbing and heating equipment, and maintenance services. Purchasing agents negotiate prices and assess fair market values.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none">• There are no Individual Occupational Requirements for this series listed under Office of Personnel Management.• Desired (but not required) majors could be natural resources, agriculture, agribusiness/agricultural economics, and business.• To start at the GS-05: Requires a bachelor's degree.



Human Resources Management

Series 1170 (Realty specialist)

Series	Description and Basic Qualifications
1170	<p>Realty specialists prepare the sale or transfer of National Forest lands and the purchase of property that becomes National Forest land. They research zoning, on-site inspections, titles and acquired rights-of-way to assess the possibility of a sale, purchase or land exchange.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none">• There are no Individual Occupational Requirements for this series listed under Office of Personnel Management.• Desired (but not required) majors could be natural resources, agriculture, agribusiness/agricultural economics, and business.• To start at the GS-05: Requires a bachelor's degree.



Human Resources Management

Series 1315 (Hydrologist)

Series	Description and Basic Qualifications
1315	<p>Hydrologists work indoors and outdoors conducting inventories of water sources, such as streams, lakes and springs using various techniques. They look at the health of water bodies and how they might be impacted by Forest management or other disturbances, by analyzing flow patterns, temperature, use, quantity and quality in order to come up with management recommendations. Hydrologists closely work with other specialists, such as engineers, fish biologists, and soils scientists.</p> <p><u>Basic Qualifications:</u></p> <ul style="list-style-type: none">• Requires a bachelor's degree in physical or natural science, or engineering that included at least 30 semester hours in any combination of courses in hydrology, the physical sciences, geophysics, chemistry, engineering science, soils, mathematics, aquatic biology, atmospheric science, meteorology, geology, oceanography, or the management or conservation of water resources.• Course work must have included at least 6 semester hours in calculus (including both differential and integral calculus), and at least 6 semester hours in physics.• For series 1315, a bachelor's degree will qualify a person to start at a GS-05.• A person may qualify to start at a GS-07 with a degree plus superior academic achievement, normally a cumulative GPA over 3.0.• A person may also qualify to start at a GS-07 with at least 1 year of related graduate education—natural resources management, conservation, environmental management or environmental policy, etc. Most of the specific qualifications are met with an appropriate undergraduate degree.• Challenge to consider: The calculus and physics requirements for hydrology are more difficult. Environmental and agricultural engineering majors are good candidates for hydrology.• Link to Office of Personnel Management Qualifications for Series 1315

Series 2210 (Information technology specialist)

Series	Description and Basic Qualifications
2210	<p>Information technology specialists keep the Forest Service operating in the advanced digital age. From cyber security to managing wireless</p>



Human Resources Management

Series

Description and Basic Qualifications

internet connection, they provide support through technology that allows all employees to do their jobs in an office and out in the field.

Basic Qualifications:

- Requires a bachelor's degree in computer science, engineering, information science, information systems management, mathematics, operations research, statistics, or technology management or degree that provided a minimum of 24 semester hours in one or more of the fields identified above and required the development or adaptation of applications, systems or networks.
- To start at the GS-05: Requires a bachelor's degree.
- To start at the GS-07: Superior academic achievement or 1 full year of graduate level education.
- To start at the GS-09: Requires a master's degree or equivalent graduate degree or 2 full years of progressively higher level graduate education leading to a master's degree or equivalent graduate degree
- Experience must be IT related; the experience may be demonstrated by paid or unpaid experience and/or completion of specific, intensive training (for example, IT certification).
- Link to [Office of Personnel Management Qualifications for Series 2210 Alternative A](#)